REMARKS

Applicants respectfully request reconsideration of the above-captioned application. Claims 1-10 are currently pending.

The Office Action of December 20, 2001, includes an objection to the drawings suggesting that the various angle information recited in claims should be shown in the drawings. Accordingly, Applicants propose to include Figure 4 as attached to the concurrently filed Request for Approval of Drawing Changes. The subject matter shown in proposed Figure 4 is fully supported by the disclosure appearing at page 6, lines 5-25 and page 20, lines 21-34, as well as page 22, lines 18-25. Pages 6, 20 and 22 have been amended only to include reference numbers utilized in proposed Figure 4.

It is believed that proposed Figure 4 is fully supported by this text and elsewhere. Specifically, Figure 4 has been prepared by extracting the first optical anisotropic layer (4a) and the second optical anisotropic layer (3a) from Fig. 1 or 2. The angles ($\theta 1$ and $\theta 2$) between the directions (DM1 and DM2) and the planes (LP1 and LP2) are obtained by projecting the directions (DM1 and DM2) on the planes (LP1 and LP2) to the dotted lines, and by measuring the angles between the directions (DM1 and DM2) and the dotted lines. Should the Examiner have any questions in this regard, the undersigned will be glad to go through each and every line and reference number shown in Figure 4 with the Examiner, either over the telephone or in person.

The Office Action notes misspelled words such as "angel" instead of --angle-- throughout the specification and in particular, page 2, lines 25 and 29 and page 3, line 4. These and other changes have been made by the above.

The Abstract of the Disclosure was found objectionable. Specifically, in the Office Action at the paragraph bridging pages 2 to 3, the Examiner suggests that the structural relationship of this direction and the layer plane in reference to other elements of the polarizing plate, including the liquid crystal layer, the second optical anisotropic layer and the polarizing membrane, etc. need to be described. However, the direction and the plane can be defined and described without reference to the other elements, as is provided in the amended Abstract and described in Figure 4. In light of these comments and the amended Abstract, reconsideration and withdrawal of this objection are respectfully requested.

The Office Action includes a rejection of claims 1-10 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Examiner's interpretation of the claims is correct. It is respectfully submitted that insofar as the Examiner correctly interpreted the claims, Applicant submits that the originally filed claims were sufficiently descriptive.

Specifically, the Office Action includes an objection to the terms "the direction giving the maximum refractive index" and "the layer plane." However, Applicants submit that the terms are self-explanatory.

A refractive index of an optically anisotropic layer is measured by light, which is incident on the layer in a direction. The refractive index varies with the direction of incidence. The direction giving the maximum refractive index means the direction of incidence in which the maximum refractive index is measured. The direction giving the maximum refractive index has been well known as the slow axis, as is described in the Aminaka patent (U.S. Patent 6,064,457), cited in the Office Action. The layer plane is, of

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course, the plane of the layer. If this objection is continued, a more complete explanation of its basis is requested.

In light of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

The Office Action also includes an objection to claims 1 and 10 noting the misspelling of the word "angle." These misspellings have been corrected.

The Office Action also includes a rejection of claims 1 and 4-10 under 35 U.S.C. § 103(a) as allegedly being obvious over the Aminaka patent (U.S. Patent 6,064,457) and a rejection of claims 2 and 3 under 35 U.S.C. § 103 as allegedly being obvious over the Aminaka patent as applied to claim 1, and further in view of the Kawata patent (U.S. Patent 6,061,113). These rejections are respectfully traversed.

Aminaka patent discloses an ellipsoidal polarizing plate comprising a first optical anisotropic layer (31), transparent substrate (33) and a polarizing membrane (34).

However, transparent substrate (33) disclosed in Aminaka patent is different from the "second optical anisotropic layer" defined in claims 1 and 10. The transparent substrate (33) disclosed in Aminaka patent is optically negative, while claims 1 and 10 define that the second optical anisotropic layer is optically positive.

This is evident form the in Aminaka patent at column 20, lines 30-31 and 34-39:

> A transparent substrate preferably is a polymer film made of a transparent polymer of positive inherent birefringence.
>
> A polymer film made of a polymer of positive inherent birefringence usually has a (negative) refractive index ellipsoid. The film has one or two optic axes along a normal line of the film. In the present invention, the

> above-mentioned polymer film is preferably used as the substrate in combination with an optical anisotropic layer containing a discotic....

As is shown above, the Aminaka patent describes that the transparent substrate is preferably optically negative. Further, the transparent substrates prepared in Examples 1 and 2 of the Aminaka patent (see columns 22-24) are optically negative.

Further, the ellipsoidal polarizing plate disclosed in the Aminaka patent is advantageously used in a liquid crystal display of a bend alignment mode (claims 1-10 of Aminaka patent) or a homogeneous alignment mode (claims 11-14). On the other hand, the ellipsoidal polarizing plate is advantageously used in a liquid crystal display of a TN mode (claim 10 of the present application).

For the reasons mentioned above, Applicants respectfully request reconsideration and withdrawal of the rejection appearing on pages 4 to 6 in the Office Action and applied to claims 1 and 4-10.

On pages 6 and 7 in the Office Action, claims 2 and 3 are stated to be rejected under 35 U.S.C. §103(a) as being unpatentable over the Aminaka patent as applied to claim 1 above, and further in view of the Kawata patent (U.S. Patent 6,061,113).

The ellipsoidal polarizing plate disclosed in the Aminaka patent does not comprise rod-like liquid crystal. On the other hand, claims 2 and 3 define rod-like liquid crystal.

The Kawata patent describes that a known optical compensatory sheet comprises rod-like liquid crystal (which is disclosed in Japanese Patent Provisional Publication No. 3(1991)-87720)[1], as is indicated by the Examiner. However, there is no description to the

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[1] Mention of this Japanese patent publication appears in the body of the rejection, (continued...)

effect that rod-like liquid crystal can be used in place of discotic liquid crystal. One skilled in the art would not be motivated by the applied art references to use rod-like liquid crystal in place of discotic liquid crystal, because they are completely different from each other.

For the reasons mentioned above, Applicants respectfully request reconsideration and withdrawal of the rejection appearing on pages 6 and 7 in the Office Action and applied to claims 2 and 3.

In view of the foregoing bright distinctions between the present invention and the applied art, Applicant respectfully requests withdrawal of the rejections and allowance of the present application. Should any residual issues exist, the Examiner is invited to contact the undersigned at the number listed below.

Respectfully submitted,

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[1](...continued)
but not in the introductory paragraph nor on the Examiner's form PTO-892.

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Attachment to Amendment

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Page 2, Paragraph Beginning at Line 21

The present invention provides an ellipsoidal polarizing plate comprising a first optically anisotropic layer, a second optically anisotropic layer, a polarizing membrane and a transparent protective film, wherein the first optically anisotropic layer has an [angel] angle of 5° to 85° between the direction giving the maximum refractive index and the layer plane, and wherein the second optically anisotropic layer is optically positive and uniaxial, and the second optically anisotropic layer has an [angel] angle of 0° to 5° between the direction giving the maximum refractive index and the layer plane.

Page 2, Paragraph Beginning at Line 32

The invention also provides a liquid crystal display comprising a liquid crystal cell of TN mode and two polarizing elements arranged on both sides of the liquid crystal cell, wherein at least one of the polarizing elements is an ellipsoidal polarizing plate comprising a first optically anisotropic layer, a second optically anisotropic layer, a polarizing membrane and a transparent protective film, wherein the first optically anisotropic layer has an [angel] angle 5° to 85° between the direction giving the maximum refractive index and the layer plane, and wherein the second optically anisotropic layer is optically positive and uniaxial, and the second optically anisotropic layer has an [angel] angle of 0° to 5° between the direction giving the maximum refractive index and the layer plane.

Attachment to Amendment

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Page 6, Paragraph Beginning at Line 5

In the first optically anisotropic layer, the [angel] angle θ1 between the direction giving the maximum refractive index DM1 and the layer plane LP1 is within the range of 5° to 85° as shown in Figure 4.

Page 20, Paragraph Beginning at Line 21

The second optically anisotropic layer is so optically positive uniaxial that the [angel] angle θ2 between the direction giving the maximum refractive index DM2 and the layer plane LP1 is within the range of 0° to 5° as shown in Figure 4.

Page 20, Paragraph Beginning at Line 25

Preferably, the projection PL of the direction giving the maximum refractive index PL_1 in the first optically anisotropic layer onto the layer plane is essentially perpendicular, on the same plane, to the direction PL_2 giving the maximum refractive index in the second optically anisotropic layer.

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Attachment to Amendment

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Page 20, Paragraph Beginning at Line 30

The second optically anisotropic layer can be formed from horizontally aligned rod-like liquid crystal molecules 51 or from a horizontally stretched polymer film. It is preferred that the layer be formed from a stretched, particularly uniaxially stretched polymer film.

Page 22, Paragraph Beginning at Line 18

In the case where the second optically anisotropic layer is formed from rod-like liquid crystal molecules 52, the average inclined angle of the liquid crystal molecules (the average angle θ2 between the liquid crystal molecules and the layer plane) is within the range of 0° to 5°. Except the average inclined angle, the conditions of the liquid crystal molecules are the same as those described for the first optically anisotropic layer.

Attachment to Amendment

Marked-up Claim 1

1. (Amended) An ellipsoidal polarizing plate comprising:

a first optically anisotropic layer[,];

a second optically anisotropic layer[,];

a polarizing membrane; and

a transparent protective film,

wherein the first optically anisotropic layer has an [angel] angle of 5° to 85° between the direction giving the maximum refractive index and the layer plane, and wherein the second optically anisotropic layer is optically positive and uniaxial, and the second optically anisotropic layer has an [angel] angle of 0° to 5° between the direction giving the maximum refractive index and the layer plane.

10. (Amended) A liquid crystal display comprising a liquid crystal cell of TN mode and two polarizing elements arranged on both sides of the liquid crystal cell, wherein at least one of the polarizing elements is an ellipsoidal polarizing plate comprising a first optically anisotropic layer, a second optically anisotropic layer, a polarizing membrane and a transparent protective film, wherein the first optically anisotropic layer has an [angel] angle of 5° to 85° between the direction giving the maximum refractive index and the layer plane, and wherein the second optically anisotropic layer is optically positive and uniaxial, and the second optically anisotropic layer has an [angel] angle 0° to 5° between the direction giving the maximum refractive index and the layer plane.

Attachment to Amendment

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ABSTRACT OF THE DISCLOSURE

[An ellipsoidal polarizing plate comprises two optically anisotropic layers, a polarizing membrane and a transparent protective film. One of the optically anisotropic layers has an angel of 5° to 85° between the direction giving the maximum refractive index and the layer plane. The other is optically positive and uniaxial, and has an angel α_2 of 0° to 5° between the direction giving the maximum refractive index and the layer plane] An ellipsoidal polarizing plate comprises two optically anisotropic layers, a polarizing membrane and a transparent protective film. Each of the optically anisotropic layers has a direction giving the maximum refractive index and a plane of the layer. The First optically anisotropic layer has an angle of 5° to 85° between the direction giving the maximum refractive index and the plane. The second optically anisotropic layer is optically positive and uniaxial. The second optically anisotropic layer has an angle of 0° to 5° between the direction giving the maximum refractive index and the layer plane.